



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0503; Project Identifier AD-2021-00163-T; Amendment 39-21769; AD 2021-21-09]

RIN 2120-AA64

**Airworthiness Directives;** The Boeing Company Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2005-05-18, which applied to certain The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. AD 2005-05-18 required repetitive inspections for cracking of the webs of the aft pressure bulkhead at a certain body station, and corrective action if necessary. This AD was prompted by cracking found in that inspection area on airplanes not identified in the applicability of AD 2005-05-18. This AD retains the requirements of AD 2005-05-18, revises the applicability to include additional airplanes, and adds an inspection for existing repairs on the newly added airplanes. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600

Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0503.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0503; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3524; email: [wayne.lockett@faa.gov](mailto:wayne.lockett@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2005-05-18, Amendment 39-14007 (70 FR 12410, March 14, 2005) (AD 2005-05-18). AD 2005-05-18 applied to certain The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes. The NPRM published in the *Federal Register* on June 30, 2021 (86 FR 34660). The NPRM was prompted by cracking found in an inspection area on airplanes not identified in the applicability of AD 2005-05-18. In the NPRM, the FAA proposed to continue to require repetitive

inspections for cracking of the webs of the aft pressure bulkhead at a certain body station, and corrective action if necessary. The NPRM also proposed to require revising the applicability to include additional airplanes, and adding an inspection for existing repairs on the newly added airplanes. The FAA is issuing this AD to address fatigue cracks in the webs of the aft pressure bulkhead, which could result in rapid decompression of the airplane.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received comments from United Airlines and Jack Kendrick, who supported the NPRM without change.

The FAA received additional comments from two commenters, including Boeing and Aviation Partners Boeing. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Effects of Winglets on Accomplishment of the Proposed Actions**

Aviation Partners Boeing stated that the installation of blended or split scimitar winglets per Supplemental Type Certificate (STC) ST00830SE does not affect compliance with the proposed actions.

The FAA agrees with the commenter that the installation of winglets per STC ST00830SE does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST00830SE does not affect the ability to accomplish the actions required by this AD. Operators of airplanes with these winglets do not need to request a "change in product" alternative method of compliance (AMOC) approval as specified in 14 CFR 39.17. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD, and added paragraph (c)(2) to this AD accordingly.

## **Request to Clarify Service Information Description**

Boeing asked that the FAA clarify the language describing the inspection location and reporting requirements in the “Related Service Information Under 1 CFR 51” paragraph in the preamble of the proposed AD. Boeing stated that the language should identify the center dome apex location, and also specify reporting of any cracks found.

The FAA agrees with the commenter’s request to clarify the inspection location in the “Related Service Information” section, due to the vast number of web fasteners located around the bulkhead. The FAA has clarified that language accordingly.

The FAA does not agree with the commenter’s request to add reporting language to that section, because the manufacturer did not include a reporting requirement for this particular cracking condition in the service information. Therefore, the FAA has not changed this AD in this regard.

## **Request to Clarify Language in Actions Since AD 2005-05-18 Was Issued Section**

Boeing requested that the FAA clarify the language in the Actions Since AD 2005-05-18 Was Issued section of the proposed AD. Boeing suggested changing the sentence that begins “During the assembly process on line numbers 1167 through 1755, the fasteners,” as follows: “Fasteners on line numbers 1167 through 1755 in the apex dome region are subjected to clamp-up stresses from the assembly process and fatigue cycles during fuselage pressurization.” Boeing stated that this change is to clarify the meaning of the language used in the proposed AD.

The FAA acknowledges the commenter’s request and agrees the proposed wording provides clarity. However, that section is not carried over into this final rule. Therefore, the FAA has not changed this AD in this regard.

## **Conclusion**

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor

editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

#### **Related Service Information under 1 CFR Part 51**

The FAA reviewed Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021. This service information specifies procedures for a general visual inspection for existing repairs, repetitive detailed and high frequency eddy current (HFEC) inspections for cracks around the web center dome apex fasteners, repetitive low frequency eddy current (LFEC) inspection for cracks around the hidden web lap splice fastener locations, and repair of cracks. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **Costs of Compliance**

The FAA estimates that this AD affects 744 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

##### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Detailed, HFEC, and LFEC inspections	Up to 10 work-hours X \$85 per hour = Up to \$850 per inspection cycle	\$0	Up to \$850 per inspection cycle	Up to \$632,400 per inspection cycle
General visual inspection (194 airplanes)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$16,490

The FAA estimates the following costs to do any necessary repairs that are required based on the results of the inspections. The FAA has no way of determining the number of aircraft that might need these repairs:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repair	Up to 30* work-hours X \$85 per hour = Up to \$2,550	Up to \$30,000*	Up to \$32,550*

\*Repair costs will vary depending on size of the repair required.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2005-05-18, Amendment 39-14007 (70 FR 12410, March 14, 2005); and

b. Adding the following new AD:

**2021-21-09 The Boeing Company:** Amendment 39-21769; Docket No. FAA-2021-0503; Project Identifier AD-2021-00163-T.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2005-05-18, Amendment 39-14007 (70 FR 12410, March 14, 2005) (AD 2005-05-18).

#### **(c) Applicability**

(1) This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, and -900 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes

on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

**(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by a report of cracks found at several of the fastener rows in the web lap splices at the dome apex of the aft pressure bulkhead, and the determination that airplanes not affected by AD 2005-05-18 are subject to this unsafe condition. The FAA is issuing this AD to address fatigue cracks in the webs of the aft pressure bulkhead, which could result in rapid decompression of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Except as specified by paragraph (h) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1251 Revision 2, dated January 20, 2021, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021. For Group 1 airplanes, as defined in Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021: Step 3.B.2. of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, is an RC step, and the provisions of paragraphs (j)(5)(i) and (ii) of this AD apply.



#### **(h) Exceptions to Service Information Specifications**

(1) Where Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, uses the phrase “the Revision 1 date of this service bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, specifies contacting Boeing for repair instructions or for alternative inspections: This AD requires doing the repair, or doing the alternative inspections and applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

#### **(i) Credit for Previous Actions**

(1) For airplanes having line numbers 1 through 1166 inclusive: This paragraph provides credit for the corresponding actions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 737-53-1251, dated June 3, 2004, which was incorporated by reference in AD 2005-05-18.

(2) This paragraph provides credit for the corresponding actions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 737-53A1251, Revision 1, dated September 22, 2020, which is not incorporated by reference in this AD.

#### **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the

manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2005-05-18 are approved as AMOCs for the corresponding provisions of Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021, that are required by paragraph (g) of this AD.

(5) Except as specified by paragraph (h) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(5)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining

approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(k) Related Information**

(1) For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3524; email: wayne.lockett@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (4) of this AD.

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 737-53A1251, Revision 2, dated January 20, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the

availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 8, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2021-24225 Filed: 11/5/2021 8:45 am; Publication Date: 11/8/2021]